Safety Analysis Software Problem Reporting Form

Software Name:	POSTMAX v. 2.0
Person Reporting Problem:	Raymond F. Sartor
Problem #:	POSTMAX_problem_4

Definition of Potential Problem:

POSTMAX writes a warning file to report that the maximum X/Q value was not found within the MACCS2 geometric grid. These warning messages may indicate that the spatial grid in the MACCS2 input file needs to be revised. Or it may be that the values for this particular trial (hour) are already insignificant compared to the 95th percentile results and a more precise value for this trial is not beneficial.

The POSTMAX results are also written to the warning file to help the analyst to determine if revisions to the MACCS2 geometric grid are required. When POSTMAX is used with option 1, the results are the 95th percentile X/Q value and direct comparison of the warning message values and the reported results is valid. When POSTMAX is used with option 2, the results are the 95th percentile (X/Q × LPF) value and the warning message values should not be directly compared to the (X/Q × LPF) reported results.

Evaluation of Potential Problem:

POSTMAX does not produce any erroneous value due to this problem. However, analysts using option 2 may not recognize the error messages and the reported results are different quantities (X/Q versus X/Q × LPF) and misunderstand the error file.

Risk Assessment:

This problem is not significant because a short-term corrective action is possible.

Recommended Corrective Actions:

Short-Term – When a coupled X/Q-LPF analysis (POSTMAX option 2) is required, a X/Q analysis (option 1) should be performed first. Then the error file of the X/Q analysis can be used to evaluate whether the MACCS2 geometric grid is appropriate.

Long-Term – Change the POSTMAX source code to not write the POSTMAX (X/Q × LPF) results to the warning file when option 2 is selected.

Problem Closure: **Software Owner**	_____ _____ Name Date
SQM SME	_____ _____ Name Date